

REMARKS

In the final Office Action dated April 06, 2007, the rejections of claims 1-3 and 7-24 under 35 U.S.C. 102(b) and 103(a) as set forth in the Office Action dated November 20, 2006 were maintained. In the Response to Amendment section, the Examiner indicated that it was “unclear as to what additional components would materially affect the basic and novel characteristics of the claimed invention.”

The present claimed invention is directed to an uncured composite product that remains stable (i.e. uncured) at room temperature (See paragraph 20, lines 9-11 of applicant's specification). Product stability at room temperature is achieved by placing a resin layer on one side of a fibrous reinforcement layer and placing a hardening agent layer on the other side of the fibrous reinforcement. The fibrous reinforcement functions as a physical barrier between the resin(s) in the resin layer and the hardening agent(s) in the hardening agent layer ((See paragraph 20 at lines 1-9). It is apparent that the addition of a hardening agent into the resin layer would cause premature curing and materially destroy the room temperature stability of the uncured product, which is a basic and novel characteristic of the claimed invention. Likewise, the addition of resin into the hardening agent layer would also cause premature room temperature curing of the uncured product.

As set forth in paragraph 26 of applicant's specification, the resin layer may include additive(s) in addition to the resin. These additives do not materially affect a basic and novel characteristic of the claimed invention (i.e. room temperature stability). Instead, the additives are conventional additives that are added to modify the performance of the final cured composite. The hardening agent layer may also include additives, in addition to the hardening agent. Again, these are conventional additives that do not materially affect the room temperature stability of the uncured product, but are rather intended to modify the performance of the cured product.

In view of the above explanation, it is now clear that resin and hardening agents are “additional components” that would materially affect a basic and novel

characteristic of the claimed invention (i.e. room temperature stability) if resin was added to the hardening agent layer or if hardening agent was added to the resin layer. It is equally clear that additives are compounds that may be included in either the resin layer or the hardening agent layer without materially affecting a basic and novel characteristic of the claimed invention. Accordingly, a resin layer that “consists essentially of” a thermosetting resin means that the resin layer is made up of thermosetting resin(s) and additives, but specifically does not include any hardening agent. Further, a hardening agent layer that “consists essentially of” a hardening agent means that the hardening agent layer is made up of hardening agent(s) and additives, but specifically does not include any thermosetting resin.

The Examiner also indicated in the Response to Amendment that “If applicant contends that additional steps or materials in the prior art are excluded by the recitation of “consisting essentially of,” applicant has the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant’s invention.”

Both Urech et al. and Hayashi et al. teach uncured composite products where the resin and hardening agents are added together in the uncured structure. In Example 1 of Urech et al., an uncured composite structure is described that includes layers A and B, which both include a blend of epoxy resins (thermosetting resin) and dicyandiamide (a well-know hardening agent). It is important to note that the “Stability” of the product, when stored at temperatures below 10°C, is 1-2 months (see Urech et al. at Col. 6, lines 65-66). The need to keep Urech et al.’s uncured product at temperatures below 10°C is a major inconvenience that is common to prepreg where the resin and hardner are not separated from each other (see applicant’s specification at paragraphs 5-6).

The addition of hardening agent to the resin layer and the addition of resin to the hardening agent layer are excluded by applicant’s use of “consisting essentially of” because the above prior art teachings show that to mix the two components would materially change (i.e. destroy) a characteristic of applicant’s invention, i.e. stability at room temperature.

In view of the above remarks, applicant respectfully requests that this application be reconsidered and that the claims, as amended in the Amendment filed February 16, 2007, be allowed.

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Respectfully submitted,

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